

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1. to 25. (CANCELLED).

26. (CURRENTLY AMENDED) An image recording medium comprising a support permeable to a reading electromagnetic wave and a first electrode layer permeable to the reading electromagnetic wave, a reading photoconductive layer which is formed of a material containing a-Se as a major component and exhibits conductivity upon exposure to the reading electromagnetic wave, a charge accumulating portion which accumulates an electric charge of a latent image polarity generated in a recording photoconductive layer, the recording photoconductive layer which exhibits conductivity upon exposure to a recording electromagnetic wave and a second electrode layer permeable to the recording electromagnetic wave which are superposed on the support one on another in this order,

wherein the reading photoconductive layer is doped over the whole or in the surface area facing the first electrode layer with an interfacial crystallization suppressing material which suppresses interfacial crystallization of a-Se, and

wherein the thickness of a region doped with both the interfacial crystallization suppressing material and a material which increases traps for a charge of the polarity opposite to

that at which the first electrode layer is electrified and reduces traps for the charge of the same polarity as the polarity at which the first electrode layer is electrified is 0.01 to 0.1 μ m.

27. (ORIGINAL) An image recording medium as defined in Claim 26 in which said interfacial crystallization suppressing material is As.

28. (ORIGINAL) An image recording medium as defined in Claim 27 in which As is doped in an amount of 0.5 to 40atom%.

29. (ORIGINAL) An image recording medium as defined in Claim 28 in which the reading photoconductive layer is 0.05 to 0.5 μ m in thickness.

30. (ORIGINAL) An image recording medium as defined in Claim 27 in which Cl is doped in an amount of 1 to 1000ppm in addition to As.

31. (ORIGINAL) An image recording medium as defined in Claim 27 in which Na is doped in an amount of 1 to 1000ppm in addition to As.

32. (ORIGINAL) An image recording medium as defined in Claim 26 in which the interfacial crystallization suppressing material in the surface area forms a transparent interfacial crystallization suppressing layer which is 0.05 to 5 μ m in thickness.

33. (ORIGINAL) An image recording medium as defined in Claim 32 in which the transparent interfacial crystallization suppressing layer is 0.1 to 0.5 μ m in thickness.

34. (ORIGINAL) An image recording medium as defined in Claim 25 in which the electrode of the first electrode layer is of ITO.

35. (ORIGINAL) An image recording medium comprising a support permeable to a reading electromagnetic wave and a first electrode layer permeable to the reading electromagnetic wave, a reading photoconductive layer which is formed of a material containing a-Se as a major component and exhibits conductivity upon exposure to the reading electromagnetic wave, a charge accumulating portion which accumulates an electric charge of a latent image polarity generated in a recording photoconductive layer, the recording photoconductive layer which exhibits conductivity upon exposure to a recording electromagnetic wave and a second electrode layer permeable to the recording electromagnetic wave which are superposed on the support one on another in this order,

 wherein an interfacial crystallization suppressing layer which is permeable to the reading electromagnetic wave, suppresses interfacial crystallization of a-Se, and has a function of blocking the electric charge at which the first conductive layer is electrified from being injected into the reading photoconductive layer is provided between the first electrode layer and the reading photoconductive layer, and

the reading photoconductive layer is doped over the whole or in the surface area facing the interfacial crystallization suppressing layer with an interfacial crystallization suppressing material which suppresses interfacial crystallization of a-Se and a material which increases traps for a charge of the polarity opposite to that at which the first electrode layer is electrified and reduces traps for the charge of the same polarity as the polarity at which the first electrode layer is electrified.

36. (ORIGINAL) An image recording medium as defined in Claim 35 in which said interfacial crystallization suppressing material is As.

37. (ORIGINAL) An image recording medium as defined in Claim 36 in which As is doped in an amount of 3 to 40atom%.

38. (ORIGINAL) An image recording medium as defined in Claim 35 in which the first electrode layer is positively electrified, and the material which increases traps for a charge of the polarity opposite to that at which the first electrode layer is electrified and reduces traps for the charge of the same polarity as the polarity at which the first electrode layer is electrified is Cl.

39. (ORIGINAL) An image recording medium as defined in Claim 38 in which the doping amount of Cl is 1 to 1000ppm.

40. (ORIGINAL) An image recording medium as defined in Claim 35 in which the first electrode layer is negatively electrified, and the material which increases traps for a charge of the polarity opposite to that at which the first electrode layer is electrified and reduces traps for the charge of the same polarity as the polarity at which the first electrode layer is electrified is Na.

41. (ORIGINAL) An image recording medium as defined in Claim 40 in which the doping amount of Na is 1 to 1000ppm.

42. (ORIGINAL) An image recording medium as defined in Claim 35 in which the thickness of the region doped with both the interfacial crystallization suppressing material and the material which increases traps for a charge of the polarity opposite to that at which the first electrode layer is electrified and reduces traps for the charge of the same polarity as the polarity at which the first electrode layer is electrified is 0.01 to 0.1 μ m.

43. (ORIGINAL) An image recording medium as defined in Claim 35 in which the reading electromagnetic wave is 350 to 550nm in wavelength.

44. (ORIGINAL) An image recording medium as defined in Claim 35 in which the interfacial crystallization suppressing layer is of an organic film.

45. (ORIGINAL) An image recording medium as defined in Claim 44 in which the organic film is of an organic polymer.

46. (ORIGINAL) An image recording medium as defined in Claim 44 in which the organic film is of a mixture of an organic binder and a low-molecular organic material.

47. (ORIGINAL) An image recording medium as defined in Claim 35 in which the interfacial crystallization suppressing layer is 0.05 to 5 μ m in thickness.

48. (ORIGINAL) An image recording medium as defined in Claim 47 in which the interfacial crystallization suppressing layer is 0.1 to 0.5 μ m in thickness.

49. (ORIGINAL) An image recording medium as defined in Claim 35 in which the electrode of the first electrode layer is a stripe electrode comprising a plurality of line electrodes and said interfacial crystallization suppressing layer is provided continuously along the upper surface and the longitudinal side surfaces of each of the line electrodes.

50. (ORIGINAL) An image recording medium as defined in Claim 49 in which the electrode of the first electrode layer is of ITO.

51. (CANCELLED)

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52. (ORIGINAL) A method of manufacturing an image recording medium as defined in Claim 49 characterized in that material of said interfacial crystallization suppressing layer is applied in the longitudinal direction of the line electrodes.